UNITED STATES GOVERNMENT

Memorandum

TO : INR/XR, Mr. William P. Deary
Department of State

DATE: July 7, 1972

FROM : SER/MP/SYS, Erwin J. Lachman
A.I.D.

SUBJECT: Annual Report on Intelligence Information Handling

1. Attached is the A.I.D. submission for the FY 1972 Report.

2. The text concentrates on developments that have taken place during the year, taking into consideration various elements of the current reorganization of A.I.D. which is still continuing.

3. In accordance with your conversation with Mr. Sherry of my office, the text is similar in format to that of our previous submissions. The items reported on have been selected from the Annual Report to Congress on Strengthened Management Practices in the Agency -- the so-called Tunney Amendment Report.

Attachment:
As Stated

AGENCY FOR INTERNATIONAL DEVELOPMENT

Introduction

This year the Agency has continued its efforts to improve the overall coordination of its programming and information systems. These efforts were carried out within the framework of the four tasks set last year to meet anticipated information requirements, which were discussed in detail in our FY 1971 Annual Report. The more significant of these developments are:

-- A new central system for the bibliographic control and announcement of A.I.D. reports and documents ("A.I.D. memory" materials) has been launched (for details see page 4 below).

-- A survey program to document all existing program and program support systems has been initiated. A survey of the participant training system was completed, and the work on the program and technical assistance systems is in its last stages.

-- A new Systems Coordination Staff has been established with the specific function of providing Agency-wide inter-systems coordination in order to reduce problems of incompatibility, gaps, and duplication.

The following are descriptions of the individual systems developments which have taken place during the FY 1972 reporting period.

Planning, Budgeting, Accounting, Reporting System

A new integrated financial system for planning, budgeting, accounting and reporting is being developed, to be responsible to the shift in emphasis from the country approach to the priority development problem approach. The system, when operational, will be capable of pulling together on an Agency-wide basis fiscal information on the various A.I.D.-administered resources being devoted to particular development problems and to areas of concentration. It will also provide A.I.D. managers with timely, accurate data that will allow them to compare actual financial performance with planned performance. The system is intended to assist the Agency in measuring financial progress toward its stated development objectives in each recipient country.

Auditor General Information System (AGIS)

The new Auditor General Information System, which was described in last year's Report, became operational on July 1, 1971. It utilizes the Agency's leased IBM computer system. Minor modifications may be desirable as the client gains experience in working with the products of the automated system.

Revised Automatic Manpower and Personnel System (RAMPS)

A follow-up evaluation of the results of the first 6 months' operation under this new system was completed on February 1, 1972. Results showed that RAMPS is providing the Agency with much faster and particularly much more accurate, personnel reports. Systems refinements will continue as outputs are produced and verified, and experience with the system increases. RAMPS is as closely coordinated

with the New American Payroll System (NAPS) as possible.

New American Payroll System (NAPS)

The New American Payroll System (NAPS), the development of which began last year, is in the final stages of implementation. The total system design has been completed, and the system is now in the programming and testing stages. Some of the enhancements of the new system will be improved detail documentation, reduced keypunching operations, reduced manual calculations for retroactive payments and deductions, less duplication of data because the NAPS system will derive most of its employee data from the Revised Automated Manpower and Personnel System (RAMPS), tighter control over the input to assure a more accurate data base, increased ability to respond to queries of the system, and increased flexibility built into the system to meet future requirements.

The new system will pay A.I.D. employees in both Washington, D.C. and the field Missions. Additionally, the system has been designed to include payment of the employees of the Overseas Private Investment Corporation (OPIC).

Economic Analysis

The computer facilities in the Bureau for Program and Policy Coordination, have been extended to include on-line access to the International Financial Statistics of the International Monetary Fund through a private time-sharing service. This company has also completed negotiations with the International Bank for Reconstruction and Development to put their data series in a similar direct access configuration. The computer terminal has been used quite intensively

this year. In addition to our yearly response to Section 620 (S) of the Foreign Assistance Act a number of independent studies have been undertaken on such diverse subjects as the determinants of foreign aid and a complete five-sector econometric model of the Thailand economy.

Reports and Document System

An important new development in this area has been the launching of a new central system for the bibliographic control and announcement of "A.I.D. memory" materials, (i.e., reports and documents conveying information on A.I.D. experience) by means of a published catalogue. This effort represents A.I.D.'s first exploratory step in the development of an automated system for indexing and retrieving such documents. Using the facilities of the National Technical Information Service in the Department of Commerce, the A.I.D. Reference Center (ARC) has, during the first six months of this calendar year, entered approximately 5,000 significant "A.I.D. memory" documents on magnetic tapes. For these and other data to be added during the year, three quarterly catalogues and one annual consolidated catalogue will be published in this calendar year.

The catalogue, called "A.I.D. Memory Documents," contains a listing of documents by primary subject field and four supporting indexes. It will be distributed widely within the Agency and will contain instruction for obtaining copies of the documents listed, either on loan or for permanent retention. Before attempting to move

further with an automated retrieval system, ARC will proceed to gain experience by conducting manually the necessary special searches for documents needed to improve the Agency's planning efforts and the implementation of ongoing projects.

The publication of bibliographies to stimulate effective use of reports and documents that reflect the lesson gained from the past experience of the Agency has continued. Three more were published in FY 1972: "Administration of Agricultural Development," "Food Marketing in Developing Countries," and "Fisheries." A fourth, "Teacher Education" is in the final printing stage. Others underway and planned include, "Technical Advisor-Counterpart Relationships, "Social Indicators," "Labor Education," "Small and Medium Industrial Development in Newly Developing Countries," "Cooperatives," "Agricultural Credit, Rural Savings and Capital Formation," "Midwifery," and "Cassava."

Participant Training

The Office of International Training has expanded its automated system in FY 1972 to produce an additional ten reports. The reports are varied in format and content and have helped the recipient client offices to improve their management of the Participant Training Program.

During the fiscal year the entire automated system of the Office of Participant Training was converted from the cumbersome Formatted File System to the IBM 360/50 system. This has resulted in a savings of approximately $2,000 a month and a decrease in computer processing time of approximately 17 hours a month. These savings and an improvement in service have been realized even though the client's reporting

requirements have increased to the current level of producing some thirty different reports.

Commodity System

A series of new printouts was developed and is now being used operationally to monitor implementation of the Agency's "untied-procurement" policy which allows borrowers to use A.I.D. loan funds to procure certain commodities from other developing countries. These new printouts permit pertinent data to be analyzed expeditiously in a variety of ways: in terms of worldwide totals by major type of commodity; source-destination countries; individual loan balances, etc.

Loan Accounting Information System

A new computer program has been developed by which quarterly disbursements data are arrayed to provide a basis for: (1) monitoring loan implementation progress by individual loan, or in aggregation, by loan type country or sector (a) comparing A.I.D. loan implementation progress to that of the other major international lending agencies in areas of common lending experience, and (3) establishing loan implementation norms thus enhancing the Agency's capability for financial planning and analysis.

Allotment Accounting System

This system, which provides daily, monthly, quarterly, and annual reports on the current status of all AID/Washington appropriations, obligations, and expenditure transactions, is currently utilizing the IBM 1401 computer. In FY 1972, there has been a concerted

effort to design and implement a new system on the IBM 360/50 computer. The new system, scheduled to begin on July 1, 1972, will focus on improved data entry techniques, purification of input data to the Master Files, timeliness and accuracy of reporting, and utilization of computer capabilities.

Use of Automated Data Processing in Technical Assistance Projects

An increasing number of technical assistance projects utilize automated data processing (ADP) technology to increase their analytical, management, and evaluation capabilities, as they relate to solving certain development problems.

In the agricultural sector, ADP is being used to collect, evaluate, and store project information on: the fertilizer production capabilities of both developing and developed nations, fertilizer use statistics, fertilizer application studies, host-country water resource capabilities, climatology including thermal data and wind, humidity and precipitation data, insect and vertebrate pest crop damage, insecticide data, disease-resistant plant materials, the composition of livestock feeds and forages, and a host of other data, such as information on the protein enrichment of legumes. This information provides project technicians and host-country planners with important data on such things as crop and seed selection, pest control, and climatic trends. These data are essential to effective developmental planning in the agricultural sector.

In human resources development projects, ADP continues to be used in the evaluation of the effectiveness of TV and other innovations for the modernization of education in the developing countries.

In the area of science and technology, informational materials are being made available to developing country scientists and development technicians by the National Technical Information Service (NTIS), Department of Commerce, under an agreement with A.I.D. These materials cover the newest technological service developments of particular interest to these specialists; they are disseminated in the form of a quarterly catalogue, based on an ADP retrieval process. In its two quarterly issues this year, approximately 600 documents are listed that can be purchased directly from the NTIS.

In the health sector, the pre-project study mentioned in last year's Report is being completed. A computer-based model to investigate the relations between health and development is being projected for early FY 1973.

Extensive use of ADP continues to be made in the population field. ADP will be used in demographic trend analysis to determine the inter-relationships between population increases, economic growth and development. In FY 1972, a new computerized reporting system on contraceptive commodity flows was developed. The system provides up-to-date reports on purchases, deliveries, and pipeline of contraceptive commodities by country or region of destination and by the grantee or USAID involved for any period of time since the inception of the program.

Mission Activities

The Data Processing Management staff in Vietnam prepared a comprehensive plan to carry out their three year program to transfer

the automated data processing functions of the Mission to the Government of Vietnam. This plan was approved and is being supported by the Prime Minister's office in Saigon. It includes provisions for the training of key Vietnamese personnel, preparation of the computer site, procurement of a computer system, and contract assistance in transferring the workload and interim facilities management during the conversion. The Office of Data Systems is providing technical backstop assistance to the Vietnam project officer in Washington.

In India, work has continued in refining ADP systems in the areas of finance and accounting, commodities, personnel, participant training, and food and nutrition.

The Mission in Laos has developed a Program Management Information System which makes use of ADP facilities; it serves as a planning aid to project managers and provides historical records on each activity.

Sector Analysis for Latin America

In the Latin American area, A.I.D. has pioneered with a new approach to problems in agriculture and education, based on a comprehensive sector analysis and strategy to meet constraints to growth over the entire sector. By using the advanced mathematical techniques of input-output and linear programming models, A.I.D. and host-country officials have attempted to quantify the interrelationships of all significant factors within a sector and determine the inputs which will maximize the outputs desired. For example, by identifying the relative importance of credit, fertilizer, marketing facilities, research, etc., in an agriculture sector, and tracing both the direct

and indirect effects of varying inputs, we can choose that group of projects within a sector program which will maximize production or employment, reduce income disparities or meet some other critical goal. Through such an analysis we have discovered, for example, that a given amount of credit directed to small farmers growing beans when traced through the economy will result in twice as much employment as compared with a similar credit investment in wheat. Such a sophisticated tool of analysis is now being built into some Latin American agriculture Ministries with direct A.I.D. assistance. The result is to greatly increase the effectiveness of both domestic and external investments in a sector.

A comprehensive sector analysis of Colombian agriculture has currently produced 65 technical documents. Results of this analysis were used to some extent to determine the direction of the FY 1971 sector loan to Colombian agriculture, and was used as the major planning tool for the FY 1972 loan for this sector.

In addition to the methodology for sector analysis in agriculture, the Latin American Bureau is helping collect and analyze comprehensive data on the education sector, country by country, in order to help individual countries assess their major weaknesses in education and to direct their scarce resources in the most efficient way to overcome them. This system is very nearly complete, and a data base complete enough for use has been developed for five countries.

Simulation Modeling of Korean Agricultural Sector

A simulation approach to analysis of the Korean agricultural sector has been initiated through cooperation of Michigan State University (MSU) and the Korean Government Ministry of Agriculture through A.I.D. auspices. MSU research, through central A.I.D. funding, developed what is termed a "general system simulation approach" model. The approach is viewed as a flexible problem-investigating process that includes problem formulation, mathematical modeling (computerized), testing and refinement of the model and problem solution in close consultation with decision makers. All specialized modeling techniques are potential contributors to this approach, as appropriate. Included are linear programming, non-linear programming, equilibrium simultaneous equations, input/output table analysis, cost/benefit, internal rate of return, net present value analyses, program, planning and budgeting (PPB), and project evaluation and review technique (PERT).

The Korean experience is developing in two basic stages. The first is a sector study with a published report -- completed during FY 1972. The second is an adaptation of the simulation model approach described above to the Korean Agriculture Sector for program development and policy formulation. This stage will be carried out in FY 1973. The sector study was accomplished by a study group examining and analyzing Korean agriculture in order to predict the consequences of several alternative sets of policy strategies available at three points in time. The adaptation of the simulation model will permit the

handling of many more alternative, and to revise, update and expand the work done in the study stage. Consequences of alternative policy strategies can then be measured in terms of such variables as GNP, food price indexes, per capita nutrition levels, farm income, government expenditures on agriculture, foreign exchange requirements, public and private employment in agriculture, public capital investment in agriculture, value added in agriculture, per capita income, income distribution, rural-urban migration, and so forth. Through the direct involvement of Korean professionals in both stages, the establishment of a Korean capacity to use computerized simulation models for continuing analysis of the agricultural sector is an important part of the total effort.

Improvement in AID/Washington Computer Capability

In FY 1972 major efforts were initiated to reduce computer production cost by reducing computer equipment rentals and improving the efficiency of operating systems.

Our IBM 360/50 computer efficiency has been increased during the year by eliminating computer features no longer required and placing peripherals on extended lease. We are actively exploring further methods of reducing costs which may be achieved through third-party leasing, and the use of compatible peripherals available from other manufacturers. We anticipate completion of this project in early FY 1973.

Implementation of software improvements were made in FY 1972 to improve production, and program testing. A new software system -- the Generalized Information System -- was installed to substantially reduce the time required to produce one-time/limited reports to meet critical client deadlines. The Formatted File System has been converted to allow simultaneous processing with other programs, thus improving our computer production performance.

Emphasis has been given to preparing system measurement programs to determine the efficiency of our computer equipment and software systems. These statistics provide a firm basis for short and long-range equipment planning. Resource utilization programs have also been written to determine the effectiveness of our operating and equipment utilization practices. These programs provide preliminary cost data to determine computer costs and to provide a basis for future budget allocations and a potential client billing system.

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July 19, 1972

MEMORANDUM

TO : INR/RCI - Mr. William P. Deary

FROM : OPR/ADP - W. W. Francis

SUBJECT: Annual Report on Information Handling

In response to your memorandum of June 15, attached are ADP's contributions to Chapter VI and Annex A of the Annual Report of the IHC.

Attachment:
As stated

OPR/ADP:DLamb:bsk 7/19/72

CHAPTER VI

TAGS (Traffic Analysis by Geography and Subject). The Department of State tested the TAGS system of drafter-applied subject codes in November 1971 at thirty foreign service posts and in ten Department offices. Test results indicated that TAGS can successfully screen and partially index Department cables and airgrams. An operational version of TAGS has been developed, taking into account what was learned in the test.

ANNEX A: INVENTORY

The following changes should be made concerning Department of State systems listed in the inventory:

1. Page IV-B-7. Change paragraph 6 to read: "USERS - 21 visa sections..."

2. Page IV-E-1. The Automated Vietnam Information System should be deleted from the Inventory.

3. Page IV-E-2. This system is now operational.